

29. Notes on the Wasps of the Genus *Pison*, and some allied Genera. By ROWLAND E. TURNER, F.Z.S., F.E.S.

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*Key to the Genera most nearly allied to Pison.*

1. Mandibles excised on the outer margin ..... *Pisonopsis* Fox.  
Mandibles not excised..... 2.
2. Abdomen with a long petiole; mesopleurae coarsely longitudinally striated ..... *Aulacophilus* Sm.  
Abdomen without a long petiole; mesopleurae not striated... *Pison* Jur.

The petiole in *Aulacophilus* is formed by the first sternite, distinguishing the genus clearly from those species of *Pison* in which the abdomen is subpetiolate through the narrowing of the first tergite to the base.

Genus AULACOPHILUS Sm.

*Key to the Species of Aulacophilus.*

1. First recurrent nervure received distinctly before the apex of the first cubital; the slender petiole of the first segment, as far as the apex of the dorsal sulcus, longer than the hind trochanter and femur combined. .... *A. eumenoides* Dücke.  
First recurrent nervure interstitial with the first transverse cubital nervure; the slender petiole of the first segment as far as the apex of the dorsal sulcus shorter than the hind trochanter and femur combined ..... 2.
2. Petiole to the end of the sulcus no longer than the hind femur; posterior ocelli distinctly further from the eyes than from each other; three basal joints of antennae ferruginous ..... *A. vespoidea* Sm.  
Petiole to the end of the sulcus longer than the hind femur; posterior ocelli equidistant from the eyes and from each other; antennae wholly black ..... *A. jansoni* Tarn.

1. AULACOPHILUS EUMENOIDES Dücke.

*Aulacophilus eumenoides* Dücke, Zeitschr. Hym. Dipt. iv. p. 97 (1904), ♀.

This is at once distinguished from the two other species by the longer and more slender petiole, the slender portion of which

is distinctly longer than the posterior trochanter and femur combined; the second segment is gradually narrowed at the base as in *jansoni*, not broad at the junction with the first segment as in *vespoides*; the posterior ocelli are as far from each other as from the eyes, which are nearer to each other both on the vertex and the clypeus than in the two other species.

*Hab.* Obidos, Amazon (*Dücke*), November.

## 2. AULACOPHILUS VESPOIDES Sm.

*Aulacophilus vespoides* Sm. Trans. Ent. Soc. London, p. 305 (1869), ♀.

The petiole is more abruptly and strongly swollen at the apex than in either of the other species, the linear portion shorter, and the second segment very much broader at the base. The median segment is shorter than in *jansoni*, and the eyes further apart on the vertex; the colour of the legs and antennæ is also different.

*Hab.* Brazil (*Swainson*).

## 3. AULACOPHILUS JANSONI, sp. n.

♀. Nigra; opaca; segmento primo petiolo, calcarisque ferrugineis; alis subhyalinis; costa late fusco-hyalina, venis ferrugineis.

Long. 10 mm.

♀. Head, thorax, and median segment very finely and closely punctured, the frontal sulcus distinct, but very delicate; posterior ocelli as far from the eyes as from each other, the eyes about half as far again from each other on the clypeus as on the vertex. Antennæ short, much thickened towards the apex; second joint of the flagellum nearly as long as the first and third combined. Mesopleuræ very coarsely and closely horizontally striated, the area immediately below the tegulæ much more finely striated. Dorsal surface of the median segment about half as long again as the scutellum and postscutellum combined, the median sulcus distinct, the sides of the segment almost smooth, not irregularly obliquely striated on the upper part as in *vespoides*; the apical slope obscurely transversely striated, with a deep median sulcus. Petiole of the first abdominal segment a little longer than the hind femur; the swollen apical portion about twice as long as its apical breadth, much more slender and elongate than in *vespoides*; second segment gradually narrowed to the base; the third, fourth, and fifth segments with a narrow, dull brown, apical band. Second abscissa of the radius fully as long as the distance between the recurrent nervures on the cubitus; first recurrent nervure interstitial with the first transverse cubital nervure; transverse median nervure interstitial with the basal nervure.

*Hab.* Chontales, Nicaragua (*Janson*).

Differs from *vespoides* as noticed under that species in the key.

Genus *Pison* Jur.

*Alyson* Spinola, Ins. Ligur. ii. 4, p. 253 (1808) (nec Jurine).

*Pison* (Jurine) Spinola, Ins. Ligur. ii. 4, p. 255 (1808).

*Tachybulus* Latr. Gen. Crust. et Ins. iv. p. 75 (1809).

*Nephridia* Brullé, Ann. Soc. Ent. France, ii. p. 408 (1833).

*Pisonitus* Shuck. Trans. Ent. Soc. London, ii. p. 79 (1837).

*Pisonoides* Sm. Journ. Proc. Linn. Soc., Zool. ii. p. 104 (1857) (subgenus).

*Parapison* Sm. Trans. Ent. Soc. London, p. 298 (1869) (= *Pisonoides*).

*Pseudonysson* Rad. Horæ Soc. Ent. Ross. xii. p. 104 (1876).

✓ *Paraceramius* Rad. Horæ Soc. Ent. Ross. xxi. p. 432 (1887) (= *Pisonoides*).

*Taranga* W. F. Kirby, Trans. Ent. Soc. London, p. 201 (1884).

*Pisum* Schulz, Spolia Hymen. p. 212 (1906).

The genus is very widely distributed, being found in almost all tropical and warm temperate countries, though it does not extend into the northern portions of the temperate zone. But the number of species in the different portions of its range is most uneven: out of one hundred and nine species catalogued fifty are from Australia, seventeen from the Austro-Malayan and various insular regions, thirteen from the Oriental, nine from the Palæarctic, nine from the Ethiopian, and eleven from the American regions. In my opinion, this distribution points to the genus being in a declining state, the majority of the species being from Australia or from island areas where the competition is likely to be less keen; the number of species on the large continental areas is not great, nor are individuals particularly numerous. Such of the species as have been observed build mud nests in holes in wood, key-holes, or similar situations, stocking their nests with small spiders, which are paralysed by stinging. Owing to these habits the species are easily transported on ships, giving rise to a considerable extension of range in several species, such as *P. spinolæ* and *P. argentatus*.

The genus has been divided into subgenera according to the neururation, but these subgenera are in no way natural; *Pisonoides* Sm., which must replace the later and more generally used *Parapison* Sm., has the second cell absent, but the species are not all nearly related to each other, and I have seen specimens of *Pison* in which the second cubital cell is absent on one side and present, though of small size, on the other side. *Pisonitus* Shuck., which is distinguished by the reception of the second recurrent nervure close to the middle of the second cubital cell, is difficult to separate with any certainty owing to variation in the position of this nervure in some species of *Pison*, as in *P. xanthopus* Brullé. The size of the second cubital cell is subject to much variation in many species of *Pison* and cannot be relied on for specific distinctions.

The present paper is founded on the collection of the British Museum, which contains nearly all the described Australian species, to which I am able to give a key, but owing to numerous gaps in the collection from other regions, I cannot give a key to the whole genus, but only to the species from certain regions. The sexual differences are not usually great, consisting of a difference in the shape of the anterior margin of the clypeus, and usually in an increase in the distance between the eyes in the male. But several species, such as *insigne* Sickm., *regalis* Sm., *tuberculatus* Sm., and *iridipennis* Sm., have carinæ or tubercles on the ventral segments of the male, and *algiricum* Kohl and *fenestratus* Sm. show a dilatation of some of the joints of the flagellum in the male.

The species which I have not seen are indicated by an asterisk.

*Key to the Ethiopian Species of Pison (including those from  
St. Helena, Mascarene, and Seychelles Islands).*

- |                                                                                                                                                               |                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| 1. Two cubital cells ( <i>Pisonoides</i> ).....                                                                                                               | 2.                            |
| Three cubital cells, very rarely with only two on one side ( <i>Pison</i> ) .....                                                                             | 3.                            |
| 2. Legs, except the coxæ, ferruginous; first recurrent nervure interstitial with the first transverse cubital nervure .....                                   | [(Seychelles.)                |
| Tarsi and fore tibiæ testaceous, the rest of the legs almost entirely black; first recurrent nervure received before the apex of the first cubital cell ..... | <i>P. isolatum</i> Turn.      |
| 3. Second recurrent nervure received close to the middle of the second cubital cell .....                                                                     | <i>P. testaceipes</i> Turn.   |
| Second recurrent nervure received near the apex of the second cubital cell or interstitial with the second transverse cubital nervure .....                   | <i>P. argentatus</i> Shuck.   |
| 4. The whole dorsal surface of the median segment obliquely striated .....                                                                                    | 1.                            |
| Dorsal surface of the median segment at most with a few oblique striæ at the base .....                                                                       | 5.                            |
| 5. Striæ of median segment strong; the male with the apical abdominal segments ferruginous red .....                                                          | 6.                            |
| Striæ of median segment very close and delicate; abdomen entirely black .....                                                                                 | <i>P. xanthopus</i> Brullé.   |
| 6. Sides of the median segment (mesopleuræ) strongly obliquely striated .....                                                                                 | <i>P. denticeps</i> Cam.      |
| Sides of the median segment punctured or smooth, at most with a few delicate striæ at the base .....                                                          | <i>P. clypeatus</i> Cam.      |
| 7. Median segment smooth and shining, except in the median sulcus and on the posterior slope .....                                                            | 7.                            |
| Median segment more or less strongly punctured .....                                                                                                          | [(Seychelles.)                |
| 8. Sides of median segment delicately striated at the base .....                                                                                              | <i>P. speculare</i> Turn.     |
| Sides of median segment punctured .....                                                                                                                       | 8.                            |
| 9. Abdomen smooth and shining, with only microscopic punctures; median segment very coarsely rugosely punctured .....                                         | <i>P. transvaalensis</i> Cam. |
| Abdomen closely and distinctly punctured, more strongly on the basal than on the apical segments; median segment less coarsely punctured .....                | 9.                            |
| 10. Second cubital cell minute, or even obsolete on one side .....                                                                                            | [(St. Helena.)                |
| Second cubital cell normal .....                                                                                                                              | <i>P. wollastoni</i> Turn.    |
|                                                                                                                                                               | 10.                           |
|                                                                                                                                                               | <i>P. inæquale</i> Turn.      |
|                                                                                                                                                               | 11.                           |



- |                                                                                 |                              |
|---------------------------------------------------------------------------------|------------------------------|
| 11. Apical dorsal segments smooth .....                                         | <i>P. montanus</i> Cam.      |
| Apical dorsal segments closely and distinctly punctured .....                   | 12.                          |
| 12. Posterior ocelli as far. or further, from the eyes as from each other ..... | <i>P. allongum</i> Schulz.   |
| Posterior ocelli nearer to the eyes than to each other.                         | <i>P. rhodesianum</i> Bisch. |

*Key to the Species of Pison inhabiting British India.*

- |                                                                                                                                                     |                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1. Two cubital cells ( <i>Pisonoides</i> ) .....                                                                                                    | 2.                           |
| Three cubital cells ( <i>Pison</i> ) .....                                                                                                          | 6.                           |
| 2. First abdominal segment petiolate, long and narrow, the apical breadth not more than one-third of that of the second segment .....               | <i>P. obliterated</i> Sm.    |
| First segment not petiolate or elongate, the apical breadth more than half of that of the second segment .....                                      | 3.                           |
| 3. Legs, except the coxæ, entirely light ferruginous ...                                                                                            | <i>P. erythropus</i> Kohl.   |
| Legs either wholly piceous or with the tibiæ only ferruginous .....                                                                                 | 4.                           |
| 4. Legs wholly piceous .....                                                                                                                        | <i>P. agilis</i> Sm.         |
| Tibiæ almost entirely dull ferruginous .....                                                                                                        | 5.                           |
| 5. Posterior slope of median segment finely striated on the apical half .....                                                                       | <i>P. rothneyi</i> Cam.      |
| Posterior slope of median segment finely punctured .                                                                                                | <i>P. diffrens</i> Turn.     |
| 6. Second recurrent nervure received before two-thirds from the base of the second cubital cell .....                                               | 7.                           |
| Second recurrent nervure received just before the apex of the second cubital cell, or interstitial with the second transverse cubital nervure ..... | 8.                           |
| 7. Front minutely punctured; a well-defined transverse impressed line behind the posterior ocelli .....                                             | <i>P. argentatus</i> Shuck.  |
| Front coarsely punctured; no distinct impressed line behind the posterior ocelli .....                                                              | <i>P. rugosus</i> Sm.        |
| 8. Pubescence of abdominal fascia golden; median segment coarsely longitudinally striated, the striæ not curved .....                               | <i>P. kohlii</i> Bingham.    |
| Pubescence of abdominal segments whitish, if present; striæ of median segment curved or absent ...                                                  | 9.                           |
| 9. Median segment strongly obliquely striated, without punctures .....                                                                              | <i>P. punctifrons</i> Shuck. |
| Median segment punctured, with or without a few curved striæ .....                                                                                  | 10.                          |
| 10. Median segment with a few curved striæ; wings hyaline .....                                                                                     | <i>P. orientale</i> Cam.     |
| Median segment without striæ; wings infuscate, the apical margin broadly darker .....                                                               | <i>P. fasciatus</i> Rad.     |

*Key to the Australian Species of Pison.*

- |                                                                                                                                |                                 |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| 1. Two cubital cells ( <i>Pisonoides</i> ) .....                                                                               | 2.                              |
| Three cubital cells ( <i>Pison</i> ) .....                                                                                     | 12.                             |
| 2. First abdominal segment elongate, strongly narrowed to the base .....                                                       | 3.                              |
| First abdominal segment not elongate .....                                                                                     | 4.                              |
| 3. Second cubital cell pointed on the radius .....                                                                             | <i>P. icarioides</i> Turn.      |
| Second abscissa of the radius at least half as long as the first transverse cubital nervure .....                              | <i>P. difficile</i> Turn.       |
| 4. Abdomen almost entirely ferruginous .....                                                                                   | 5.                              |
| Abdomen black, the apical margins of the segments sometimes dull brown with golden pubescence ...                              | 6.                              |
| 5. Median segment slender, longer than the breadth in the middle; eyes as far apart on the vertex as on the clypeus .....      | <i>P. pertinax</i> Turn.        |
| Median segment not slender, shorter than the breadth in the middle; eyes further apart on the clypeus than on the vertex ..... | <i>P. erythrogastrium</i> Rohw. |

- |                                                                                                                                                                                                    |     |                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------|
| 6. Slender species; abdomen entirely black, without pubescence .....                                                                                                                               | 7.  |                                 |
| More robust species; apical margin of abdominal segments dull brown, clothed with dull fulvous pubescence .....                                                                                    |     | <i>P. exclusum</i> Turn.        |
| 7. Legs more or less ferruginous .....                                                                                                                                                             | 8.  |                                 |
| Legs black; tarsi rarely luteous .....                                                                                                                                                             | 9.  |                                 |
| 8. Antennae, trochanters, and femora ferruginous; nervures testaceous .....                                                                                                                        |     | <i>P. erythrocerus</i> Kohl.    |
| Antennae, trochanters, and femora black; nervures black .....                                                                                                                                      |     | <i>P. simulans</i> Turn.        |
| 9. Cubital margin of the second cubital cell scarcely or not at all longer than the first transverse cubital nervure .....                                                                         | 10. |                                 |
| Cubital margin of the second cubital cell much longer than the first transverse cubital nervure ..                                                                                                 | 11. |                                 |
| 10. Tarsi luteous; wings strongly iridescent .....                                                                                                                                                 |     | <i>P. aberrans</i> Turn.        |
| Tarsi black; wings very feebly iridescent .....                                                                                                                                                    |     | <i>P. tenebrosus</i> Turn.      |
| 11. With a small triangular enclosed space at the base of the median segment; clypeus broadly rounded at apex .....                                                                                |     | <i>P. noctulum</i> Turn.        |
| Without an enclosed space at the base of the median segment; clypeus produced on the middle of the apical margin .....                                                                             |     | <i>P. caliginosum</i> Turn.     |
| 12. Thorax, abdomen, legs, and antennae testaceous, head only black; second recurrent nervure received before the middle of the second cubital cell .....                                          |     | <i>P. melanocephalum</i> [Turn. |
| Thorax always black; second recurrent nervure received at or beyond the middle of the second cubital cell .....                                                                                    | 13. |                                 |
| 13. Second recurrent nervure received at the middle of the second cubital cell; first recurrent received well before the apex of the first cubital cell .....                                      | 14. |                                 |
| Second recurrent nervure received either near the apex of the second cubital cell or close to the base of the third cubital cell, or interstitial with the second transverse cubital nervure ..... | 17. |                                 |
| 14. Abdomen and antennae black .....                                                                                                                                                               | 15. |                                 |
| Abdomen and antennae more or less ferruginous .....                                                                                                                                                | 16. |                                 |
| 15. Entirely black; with a continuous impressed transverse line behind the posterior ocelli .....                                                                                                  |     | <i>P. ignavum</i> Turn.         |
| Legs ferruginous, the impressed line behind the posterior ocelli interrupted .....                                                                                                                 |     | <i>P. rufipes</i> Shuck.        |
| 16. Pubescence of the clypeus and front golden; distance separating the eyes on the clypeus more than half as great again as that separating them on the vertex .....                              |     | <i>P. virosum</i> Turn.         |
| Pubescence of the clypeus and front whitish; distance separating the eyes on the clypeus much less than half as great again as that separating them on the vertex .....                            |     | <i>P. ruficornis</i> Sm.        |
| 17. Second ventral segment shining, almost or entirely impunctate .....                                                                                                                            | 18. |                                 |
| Second ventral segment closely and more or less distinctly punctured .....                                                                                                                         | 21. |                                 |
| 18. Third and fourth joints of the flagellum strongly dilated beneath .....                                                                                                                        |     | <i>P. fenestratus</i> Sm., ♂.   |
| Third and fourth joints of the flagellum not dilated.                                                                                                                                              | 19. |                                 |
| 19. Of slender build; entirely black; median segment finely and not very closely punctured .....                                                                                                   |     | <i>P. priscum</i> Turn.         |
| Of robust build; median segment closely and coarsely punctured or punctured-striate .....                                                                                                          | 20. |                                 |
| 20. Dorsal segments 2-5 with a broad apical band of golden pubescence, and a testaceous brown chitinous band beneath the pubescence .....                                                          |     | <i>P. festivus</i> Sm.          |
| Dorsal segments 2-5 entirely black, with an apical band of whitish pubescence .....                                                                                                                |     | <i>P. fenestratus</i> Sm., ♀.   |

- |                                                                                                                                                                                    |     |                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------|
| 21. Abdomen wholly ferruginous .....                                                                                                                                               | 22. |                                  |
| Abdomen wholly or partially black .....                                                                                                                                            | 24. |                                  |
| 22. Of small size, less than 7 mm. in length .....                                                                                                                                 | 23. |                                  |
| Of larger size, 11 mm. in length .....                                                                                                                                             |     | <i>P. pelletieri</i> Le Guillou. |
| 23. Posterior ocelli nearly twice as far from each other as from the eyes; head not very large, pubescence of front white and sparse .....                                         |     | <i>P. lutescens</i> Turn.        |
| Posterior ocelli nearly as far from the eyes as from each other; head massive, pubescence of front pale golden and close .....                                                     |     | <i>P. dimidiatus</i> Sm.         |
| 24. Median segment very distinctly obliquely striated ..                                                                                                                           | 25. |                                  |
| Median segment punctured, sometimes striolate-punctured at the base .....                                                                                                          | 28. |                                  |
| 25. Abdomen black, with more or less distinct bands of silver pubescence .....                                                                                                     | 26. |                                  |
| Abdomen black, with bands of golden or fulvous pubescence .....                                                                                                                    | 27. |                                  |
| 26. Mandibles and apex of clypeus black; mandibles not unusually broad; posterior ocelli separated from the eyes by a distance less than half as great as their own diameter ..... |     | <i>P. westwoodi</i> Shuck.       |
| Mandibles and apex of clypeus ferruginous; mandibles short and very broad; posterior ocelli separated from the eyes by a distance equal to their own diameter .....                |     | <i>P. mandibulatum</i> Turn.     |
| 27. Tibiæ and tarsi ferruginous, tegulæ testaceous; transverse median nervure received beyond the basal nervure .....                                                              |     | <i>P. simillimus</i> Sm.         |
| Tibiæ, tarsi, and tegulæ black; transverse median nervure interstitial with the basal nervure .....                                                                                |     | <i>P. dives</i> Turn.            |
| 28. Black, with white pubescence; the tegulæ sometimes brown, also sometimes the apex of the ventral segments .....                                                                | 29. |                                  |
| Partly ferruginous or brown; or if black then with golden pubescence on the abdominal fasciæ .....                                                                                 | 36. |                                  |
| 29. Second ventral segment evenly, closely, and finely punctured .....                                                                                                             | 30. |                                  |
| Second ventral segment much more sparsely and coarsely punctured in the middle than at the sides.                                                                                  | 33. |                                  |
| 30. Median segment shining, the punctures microscopic; length 6 to 7 mm. ....                                                                                                      |     | <i>P. infumatum</i> Turn.        |
| Median segment opaque or subopaque, very distinctly punctured or punctured-rugulose; length from 9 to 15 mm. ....                                                                  | 31. |                                  |
| 31. Second joint of the flagellum a little less than half as long again as the third; length from 12 to 15 mm. ....                                                                | 32. |                                  |
| Second joint of the flagellum scarcely exceeding the length of the third; length from 9 to 12 mm. ....                                                                             |     | <i>P. strenuum</i> Turn.         |
| 32. Posterior ocelli as far from the eyes as from each other, separated from the eyes by a distance exceeding their own diameter .....                                             |     | <i>P. perplexus</i> Sm., ♂.      |
| Posterior ocelli nearer to the eyes than to each other, separated from the eyes by a distance less than their own diameter .....                                                   |     | <i>P. fuscipennis</i> Sm., ♀.    |
| 33. Second joint of the flagellum distinctly longer than the third; abdominal segments not constricted; puncturation of the dorsal segments very minute or almost obsolete .....   | 34. |                                  |
| Second and third joints of the flagellum subequal; abdominal segments rather strongly constricted; puncturation of the dorsal segments not very minute .....                       |     | <i>P. punctulatum</i> Kohl.      |
| 34. Puncturation of the mesonotum obsolete; posterior ocelli as near to the eyes as to each other, separated from the eyes by a distance not exceeding their own diameter .....    |     | <i>P. spinolæ</i> Shuck.         |

- Puncturation of the mesonotum not obsolete; posterior ocelli nearer to each other than to the eyes, separated from the eyes by a distance considerably exceeding their own diameter ..... 35.
35. Mesonotum very finely punctured; second abscissa of the radius no longer than the petiole of the second cubital cell ..... *P. congener* Turn.
- Mesonotum more strongly punctured; second abscissa of the radius half as long again as the petiole of the second cubital cell..... *P. scabrum* Turn.
36. Two basal segments of abdomen ferruginous ..... *P. basalis* Sm.
- Second abdominal segment black; the apical margin sometimes brown ..... 37.
37. Basal segment of abdomen black; the apical margin sometimes brown ..... 38.
- Basal segment of abdomen ferruginous, with a little black at the base ..... 48.
38. Tibiæ and tarsi black or piceous..... 39.
- Tibiæ and tarsi ferruginous ..... 42.
39. Abdomen covered with golden pubescence, denser on the apical fasciæ than elsewhere; pubescence of the front golden; tibiæ and tarsi black..... *P. auriventre* Turn.
- Pubescence of the abdomen confined to the apical fasciæ; pubescence of the front silver; tibiæ and tarsi more or less piceous ..... 40.
40. Abdominal fasciæ dull whitish or dull pale fulvous; second joint of flagellum no longer than the third. Abdominal fasciæ shining golden; second joint of the flagellum much longer than the third..... 41.
41. Punctures of the median segment very close, mingled with very fine indistinct oblique striæ ..... *P. vestitus* Sm.
- Punctures of the median segment sparser and not intermingled with striæ ..... *P. marginatus* Sm.
42. Antennæ wholly black ..... *P. separatus* Sm.
- Basal joints of the antennæ ferruginous..... 43.
43. Trochanters and femora wholly ferruginous; length 6 mm. .... 45.
- Trochanters black, femora ferruginous at the apex only; length at least 8 mm. .... *P. inconspicuum* Turn.
44. Posterior ocelli in the female separated from the eyes by a distance about equal to their own diameter, in the male by a distance equal to nearly twice their own diameter ..... 44.
- Posterior ocelli in the female separated from the eyes by a distance scarcely exceeding half of their own diameter, in the male by a distance about equal to their own diameter ..... *P. tibialis* Sm.
45. Second dorsal segment with a brown chitinous apical band, clothed with golden or whitish pubescence... *P. fraterculus* Turn.
- Second dorsal segment entirely black, without a chitinous or pubescent apical band..... 46.
46. Median segment, especially at the apex, densely clothed with golden pubescence; first abdominal segment elongate, scarcely broader at the apex than the base of the median segment..... *P. pulchrum* Turn.
- Median segment without dense pubescence, the pubescence, if any, not golden; first abdominal segment much broader at the apex than the base of the median segment, not elongate ..... *P. aurifer* Sm.
47. Pubescence of abdominal fasciæ golden; length of male over 9 mm. .... 47.
- Pubescence of abdominal fasciæ whitish; length of male 7 mm. .... *P. meridionale* Turn.
48. Second dorsal segment with a broad chitinous ferruginous band at the apex, the band clothed with golden pubescence ..... *P. decipiens* Sm.
- Second dorsal segment entirely black, without golden pubescence ..... 49.
- ..... 50.



49. Posterior ocelli separated from the eyes by a distance fully equal to their own diameter; second ventral segment black, broadly ferruginous at the apex ... *P. aureosericeum* Rohw.  
 Posterior ocelli separated from the eyes by a distance distinctly less than their own diameter; second ventral segment wholly ferruginous ..... *P. auratus* Shuck.  
 50. First dorsal segment with a black spot on each side near the middle; transverse median nervure received before the basal nervure..... *P. exornatum* Turn.  
 First dorsal segment not spotted with black; transverse median nervure received beyond the basal nervure..... *P. exultans* Turn.

#### 1. PISON (PISONOIDES) ICARIOIDES Turn.

*Pison (Aulacophilus) icarioides* Turn. Proc. Zool. Soc. London, p. 521 (1908), ♀.

The species is better placed in *Pisonoides* than in *Aulacophilus*, being without the long petiole and striated mesopleuræ characteristic of the latter. The first abdominal segment is, however, much more elongate than in other species of *Pisonoides*, except *difficile*, from which it is easily distinguished by the short and stout antennæ, and the different shape of the second cubital cell.

*Hab.* Cairns, Q. (*Dodd*); Mackay, Q. (*Turner*), January; Brisbane, Q. (*Hacker*), January.

#### 2. PISON (PISONOIDES) DIFFICILE Turn.

*Pison (Aulacophilus) difficile* Turn. Proc. Zool. Soc. London, p. 520 (1908), ♀.

*Hab.* Cairns, Q. (*Turner*), January; Mackay, Q. (*Turner*).

This species and the last superficially resemble *Icaria socialistica* Sauss. and other closely related species of *Icaria*, which occur in the same district.

#### 3. PISON (PISONOIDES) PERTINAX Turn.

*Pison (Parapison) pertinax* Turn. Proc. Zool. Soc. London, p. 517 (1908), ♀.

The abdomen is usually wholly ferruginous, but the third and fourth dorsal segments are sometimes more or less infuscated.

*Hab.* Cairns, Q. (*Turner*), July; Mackay, Q. (*Turner*), November to May; Brisbane, Q. (*Hacker*), May.

#### 4. PISON (PARAPISON) ERYTHROGASTRUM Rohw.

*Pison (Parapison) erythrogastrum* Rohw. Proc. U.S. Nat. Mus. xlix. p. 247 (1915), ♀.

This is very near *pertinax*, but may be distinguished by the greater distance between the eyes on the clypeus, by the longer pronotum, and by the shorter and broader median segment. The sculpture of the median segment is also more distinct.

*Hab.* Duaringa, Q. Probably from the Barnard collection. Kalamunda, W.A. (*Turner*), February and March.

## 5. PISON (PISONOIDES) ERYTHROCERUS Kohl.

*Parapison ruficornis* Sm. Trans. Ent. Soc. London, p. 300 (1869), ♀ (nec Smith, 1856),

*Pison erythrocerus* Kohl, Verh. zool.-bot. Ges. Wien, xxxiv. p. 186 (1884), ♀.

*Pison erythrocerum* D. T. Cat. Hymen. viii. p. 711 (1897).

The clypeus of the male is armed with three short acute teeth on the middle of the apical margin.

*Hab.* Mackay, Q. (*Turner*), February to May; Kuranda, Q. (*Turner*), May and June.

## 6. PISON (PISONOIDES) SIMULANS Turn.

*Pison (Parapison) simulans* Turn. Ann. & Mag. Nat. Hist. (8) xv. p. 559 (1915), ♂.

This is very near *erythrocerus*, but in addition to colour-differences the sculpture of the median segment is more strongly developed, and there is only one tooth in the middle of the apical margin of the clypeus.

*Hab.* Eaglehawk Neck, S.E. Tasmania (*Turner*), March.

## 7. PISON (PISONOIDES) NOCTULUM Turn.

*Pison (Parapison) noctulum* Turn. Proc. Zool. Soc. London, p. 516 (1908), ♀.

The cubital margin of the second cubital cell is twice as long as the first transverse cubital nervure; the nervures are fuscous, the stigma ferruginous. The median segment is longer than in *caliginosum*, and there is a small triangular space at the base, the apex of the triangle meeting the median carina. The pronotum is longer than in *caliginosum* or *tenebrosum*.

*Hab.* Mackay, Q. (*Turner*), February; Kuranda, Q. (*Turner*), June.

## 8. PISON (PISONOIDES) CALIGINOSUM Turn.

*Pison (Parapison) caliginosum* Turn. Proc. Zool. Soc. London, p. 518 (1908), ♀.

The cubital margin of the second cubital cell is about half as long again as the first transverse cubital nervure, the latter curved, not straight as in *noctulum*; nervures and stigma black; median segment without a triangular space at the base.

*Hab.* Kuranda, Q. (*Turner*), February.

## 9. PISON (PISONOIDES) TENEBROSUM Turn.

*Pison (Parapison) tenebrosum* Turn. Proc. Zool. Soc. London, p. 518 (1908), ♀.

The second cubital cell is triangular, the cubital margin equal in length to the first transverse cubital nervure.

*Hab.* Mackay, Q. (*Turner*), January.

10. *PISON (PISONOIDES) ABERRANS* Turn.

*Pison (Parapison) aberrans* Turn. Proc. Zool. Soc. London, p. 519 (1908), ♂.

This little species differs from *tenebrosus* in the pale yellowish colour of the tarsi, in the deeper longitudinal depression on the dorsal surface of the median segment, and in the strongly iridescent wings. The cubital margin of the second cubital cell is very short, scarcely more than half as long as the first transverse cubital nervure.

*Hab.* Mackay, Q. (*Turner*), January.

11. *PISON (PISONOIDES) EXCLUSUM* Turn.

*Pison (Parapison) exclusum* Turn. Ann. & Mag. Nat. Hist. (8) xviii. p. 127 (1916), ♂.

*Parapison frenchi* Cam. MS., ♀.

This is a robust species, differing much from other Australian species of *Parapison*, and resembling *Pison vestitus* Sm., though differing constantly in the absence of the small, petiolate, second cubital cell. The female was taken in Victoria capturing spiders on orange-trees.

*Hab.* Brisbane, Q. (*Hacker*), November; Horsham, Victoria (*Davey*), July.

12. *PISON MELANOCEPHALUM* Turn.

*Pison melanocephalum* Turn. Proc. Zool. Soc. London, p. 515 (1908), ♀.

This very distinct little species cannot be confused with any other, owing to the remarkable colouring; but it is also distinguished by the very close approach of the eyes at the base of the clypeus, where they are separated by a distance only a little more than half as great as that separating them on the vertex, and by the very large facets of the eyes in front. The petiolate second cubital cell is very small, and the first recurrent nervure is received far before the apex of the first cubital cell, as in *Pisonoides pertinax* and *erythrocerus*, to which the relationship seems closer than to typical *Pison*. It is best regarded as a link between the *Pisonoides* and *Pisonitus* groups.

*Hab.* Cairns, Q. (*Turner*), February.

13. *PISON IGNAVUM* Turn.

*Pison ignavum* Turn. Proc. Zool. Soc. London, p. 511 (1908), ♀.

This belongs to Shuckard's subgenus *Pisonitus*, the second recurrent nervure being received at the middle of the second cubital cell. I look on it as the Australian subspecies of the wide-ranging *P. argentatum* Shuck., differing from the typical Mauritius form in the much stronger sculpture of the median segment.

*Hab.* Mackay, Q. (*Turner*), December to April; Kuranda, Q. (*Turner*), January to March; Ravawai, Fiji (*Veitch*), November and December.

14. *PISON RUFIPES* Shuck.

*Pison (Pisonitus) rufipes* Shuck. Trans. Ent. Soc. London, ii. p. 79 (1837), ♀.

This may be distinguished from other Australian species of the *Pisonitus* group by the black abdomen and red legs, *P. ignavum* being wholly black, and the other species of the group having the abdomen and antennæ more or less red.

*Hab.* Eaglehawk Neck, S.E. Tasmania (*Turner*), February; Mt. Wellington, Tasmania (*Turner*), January; Melbourne, Victoria (*French*); Yallingup, S.W. Australia (*Turner*), November; Kalamunda, W. Australia (*Turner*), March and April.

15. *PISON VIROSUM* Turn.

*Pison virosum* Turn. Proc. Zool. Soc. London, p. 513 (1908), ♀.

This is a larger and more robust species than *ruficornis*, and may also be distinguished by the greater distance between the eyes on the clypeus and by the golden pubescence of the clypeus and front. The abdomen is ferruginous, except at the extreme base.

*Hab.* Mackay, Q. (*Turner*), September to February.

16. *PISON RUFICORNIS* Sm.

*Pison (Pisonitus) ruficornis* Sm. Cat. Hym. B. M. iv. p. 315 (1856), ♀.

*Pison ruficorne* Turn. Proc. Zool. Soc. London, p. 514 (1908), ♀.

The type has the abdomen largely shaded with black, but in many specimens it is wholly ferruginous. In both this species and *virosum* there is a rather indistinct impressed transverse line behind the posterior ocelli, which seems to be characteristic of the *Pisonitus* group.

*Hab.* Macintyre River, Q. (type); Mackay, Q. (*Turner*), October to March; Kuranda, Q. (*Turner*), March to May; Victoria (*French*).

17. *PISON PRISCUM* Turn.

*Pison insulare* Sm. st. *priscum* Turn. Proc. Zool. Soc. London, p. 510 (1908), ♀.

The difference in the distance between the eyes on the vertex in *insularis* and *priscum* is quite distinct, though not very great; the sulcus on the median segment is much more distinct in *insularis*, and the second dorsal segment is more depressed at the base. The clypeus is also slightly different. Until a long series from different localities is available, it may be best to treat the two forms as distinct species. In *priscum* the second ventral segment is not as highly polished as in *festivus* and *fenestratus*, but there are no distinct punctures. The insect is entirely black, except on the apical margins of the ventral segments, which are brownish.

*Hab.* Mackay, Q. (*Turner*), November.



18. *PISON FESTIVUS* Sm.

*Pison festivus* Sm. Trans. Ent. Soc. London, p. 296 (1869), ♀.

The head is broad, the posterior ocelli are a little further from the eyes than from each other, the clypeus very broadly rounded at the apex. The median segment is obliquely striated, with punctures intermixed, the median carina is distinct, but not placed in a sulcus; the first dorsal segment is strongly depressed at the apex. Male unknown.

*Hab.* Swan River, W.A. (*Du Boulay*).

19. *PISON FENESTRATUS* Sm.

*Pison nitidus* Sm. Trans. Ent. Soc. London, p. 248 (1868), ♀ (nec Smith, 1858).

*Pison fenestratus* Sm. Trans. Ent. Soc. London, p. 291 (1869).

This species is allied to *festivus*, but is rather less robust, the colour of the abdominal fasciæ is different, and the median segment is closely and strongly punctured, not striate. The male has the third and fourth joints of the flagellum strongly dilated beneath.

*Hab.* Champion Bay, W.A. (*Du Boulay*); Yallingup, W.A. (*Turner*), January; Hermannsburg, Central Australia (*Hillier*).

20. *PISON DIMIDIATUS* Sm.

*Pison dimidiatus* Sm. Trans. Ent. Soc. London, p. 295 (1869), ♂.

The head is massive, the posterior ocelli being nearly as far from the eyes as from each other; the clypeus is produced into an acute point; the second abscissa of the radius is a little longer than the petiole of the second cubital cell; the transverse median nervure is interstitial with the basal, and the sulcus of the median segment is quite distinct, with the usual carina. Female unknown.

*Hab.* Champion Bay, W.A. (*Du Boulay*).

21. \**PISON PELLETIERI* Le Guillou.

*Pison pelletieri* Le Guillou, Ann. Soc. Entom. France, p. 320 (1841), ♀.

“Capite nigro, facie aureo-pubescente; antennis et mandibulis fulvis; mesothorace nigro; metathorace punctato-scabro, albo pubescente; abdomine et pedibus fulvis; alis translucidis. ♀. Long. 11 mm. *Hab.* Australie septentrionale.

Tête noire; yeux échancrés en dedans, toute la face est couverte d'un duvet doré. Antennes à mandibules fauves. Corselet noir. Métathorax pointillé en manière de chagrin, couvert d'un léger duvet blanchâtre; abdomen et pattes entièrement fauves. Ailes claires.”

22. *PISON LUTESCENS*, sp. n.

♀. Nigra; mandibulis, antennis, abdomine pedibusque rufo-ferrugineis; tegulis testaceis; alis hyalinis, venis fuscis.

Long. 4 mm.

♀. Clypeus short and broad, subtruncate at the apex, covered with delicate silver pubescence. Head very closely microscopically punctured, with an obscure frontal sulcus reaching the anterior ocellus. Eyes very little further apart on the clypeus than on the vertex; the posterior ocelli nearly twice as far from each other as from the eyes, and as far from each other as from the posterior margin of the head. Pronotum oblique; mesonotum and scutellum microscopically punctured. Median segment scarcely as long as the mesonotum, rounded posteriorly, finely punctured, granulate, the median sulcus almost obsolete, the median carina distinct; the posterior slope of the segment very finely transversely striolate, with a deep median sulcus. Abdomen minutely punctured; second segment scarcely depressed at the base, the apical margins of the segments in some lights showing fasciæ of very delicate silver pubescence. Second abscissa of the radius shorter than the petiole of the second cubital cell; recurrent nervures interstitial with the transverse cubital nervures; second cubital cell not quite as high as the length of its petiole; transverse median nervure interstitial with the basal nervure.

*Hab.* Mundaring Weir, W.A. (*Turner*), March 18, 1914.

This little species closely resembles a small *P. ruficornis*, but the neururation is different, also the sculpture of the median segment, and the antennæ are shorter and stouter.

23. *PISON WESTWOODI* Shuck.

*Pison westwoodi* Shuck. Trans. Ent. Soc. London, ii. p. 77 (1837), ♀.

? *Pison obliquus* Sm. Cat. Hym. B. M. iv. p. 316 (1856), ♀.

Shuckard states that the carina of the median segment is absent in this species, but this is not usually the case, a long series taken by me in Tasmania showing variation in this respect from a well-developed carina to the typical form as described by Shuckard. The species may be easily recognised by the striation of the whole dorsal surface of the median segment and the very close proximity of the posterior ocelli to the eyes. I think that *P. obliquus* Sm. is a synonym, but I have not seen the type. There is a short transverse carina at the base of the third ventral segment of the male, as in the closely allied *P. iridipennis* Sm.

*Hab.* Englehawk Neck, Tasmania (*Turner*), March; Mt. Wellington, Tasmania (*Turner*), January; Yallingup, W.A. (*Turner*), November; Kalamunda, W.A. (*Turner*), March; Mackaÿ, Q. (*Turner*), Cairns, Q. (*Turner*), October to June.

24. *PISON MANDIBULATUM*, sp. n.

♀. Nigra; albo-pubescent; clypeo apice mandibulisque ferrugineis; alis hyalinis, apice leviter infuscatis, venis nigris; segmento mediano oblique striato.

♂. Feminae similis; clypeo omnino nigro.

Long., ♀ 9 mm., ♂ 8 mm.

♀. Mandibles very broad and short, not narrowed at the apex; clypeus in both sexes produced in the middle, but much more distinctly so in the female than in the male. Eyes separated on the vertex by a distance about three times as great as the length of the second joint of the flagellum, on the clypeus by about four times the length of the same joint; posterior ocelli separated from the eyes by a distance fully equal to their own diameter, a little further from the posterior margin of the head than from each other. Antennae not very stout; the second joint of the flagellum equal to the third, nearly twice as long as the first. Head and thorax very closely punctured; the frontal sulcus very indistinct, the clypeus and front as high as the emargination of the eyes clothed with silver pubescence. Median segment obliquely striated on the whole dorsal surface; the median sulcus almost obsolete; the median carina distinct, but not reaching the apex; the posterior slope transversely striated. Abdomen finely and closely punctured; the first segment moderately constricted at the apex, second ventral segment evenly and very distinctly punctured. The white pubescence on the abdomen is confined to the sides of the segments, and does not form apical bands. Calcaria black. Second abscissa of the radius shorter than the petiole of the second cubital cell; recurrent nervures interstitial with the transverse cubital nervures; transverse median nervure a little nearer to the base of the wing than the basal nervure.

*Hab.* Yallingup, S.W. Australia (*Turner*), November and December. 1 ♀ and 4 ♂♂.

Easily distinguished from other black species by the colour and breadth of the mandibles. It is remarkable that the clypeus is much more distinctly pointed in the female than in the male.

25. *PISON INFUMATUM* Turn.

*Pison infumatum* Turn. Proc. Zool. Soc. London, p. 510 (1908), ♀.

This little species may be recognised by the shining median segment, on which the punctures are microscopic.

*Hab.* Port Darwin (*Turner*), December.

26. *PISON PERPLEXUS* Sm.

*Pison perplexus* Sm. Cat. Hym. B. M. iv. p. 314 (1856), ♂.

This differs from *fuscipennis* as indicated on the key by the proportionate distance between the posterior ocelli and the eyes.

I am inclined to think that this difference may prove to be sexual, but do not think it would be justifiable to sink *fuscipennis* as a synonym until more material is available.

*Hab.* Victoria (*French*).

## 27. PISON FUSCIPENNIS Sm.

*Pison fuscipennis* Sm. Trans. Ent. Soc. London, p. 294 (1869), ♀.

This is distinguished from *spinole* and other related species by the even puncturation of the second ventral segment.

*Hab.* Champion Bay, W.A. (*Du Boulay*).

## 28. PISON STRENUM, sp. n.

♀. Nigra; tegulis apice testaceis; segmentis dorsalibus 1-4 fascia apicali albo-pilosa; alis sordide hyalinis, apice leviter infuscatis, venis nigris.

Long., ♀ 11-12 mm., ♂ 9-10 mm.

♀. Clypeus closely punctured, twice as broad as long, rounded at the apex and produced in the middle into a blunt smooth process; clothed with sparse silver pubescence, which also extends as high as the base of the antennæ. Second joint of the flagellum scarcely longer than the third. Posterior ocelli about equidistant from each other and from the eyes, separated from the eyes by a distance about equal to their own diameter; the distance separating the eyes on the clypeus nearly twice as great as that separating them on the vertex. Head and thorax very closely and minutely punctured. Median segment very closely and minutely punctured, with extremely short oblique striae along the basal margin; the median sulcus distinct, without a carina, the surface of the posterior slope transversely striated, with a strong median sulcus. Dorsal surface of the abdomen microscopically punctured, the segments not constricted; second ventral segment very closely, evenly, and finely punctured. Second abscissa of the radius rather variable in length, in the type as long as the petiole of the second cubital cell, but usually shorter; recurrent nervures interstitial with the transverse cubital nervures, the first sometimes received just beyond the base by the second cubital cell; transverse median nervure interstitial with the basal.

*Hab.* Yallingup, S.W. Australia (*Turner*), October to December; South Perth, W.A. (*H. M. Giles*), January.

The male has the clypeus produced into a spine, the second joint of the flagellum distinctly longer than the third, and the eyes on the vertex further apart, only one and a half times as far apart on the clypeus as on the vertex.

The species is smaller than *perplexus* or *fuscipennis*, and has the second joint of the flagellum much shorter; the clypeus is much more produced at the apex in both sexes, and there is no fascia of white pubescence on the fifth dorsal segment, which fascia is present in *fuscipennis*.



## 29. PISON SPINOLE Shuck.

*Pison spinole* Shuck. Trans. Ent. Soc. London, ii. p. 76 (1837), ♀.

*Pison australis* Sauss. Mém. Soc. Phys. & Hist. Nat. Genève, xiv. ii. (1853), ♀.

*Pison tasmanicus* Sm. Cat. Hym. B. M. iv. p. 316 (1856), ♂.

*Taranga dubia* W. F. Kirby, Trans. Ent. Soc. London, p. 201 (1883), ♂.

*Pison pruinosus* Cam. Mem. Manchester Lit. & Phil. Soc. xlii. p. 44 (1897), ♀.

This species may be distinguished by the smooth opaque mesonotum. The second cubital cell varies much in size, being sometimes almost obsolete, as on one side in the type of *Taranga dubia*. The recurrent nervures are usually interstitial with the transverse cubital nervures, but where the second cubital cell is reduced the first recurrent is received before the apex of the first cubital cell. I can find absolutely no difference between Australian and New Zealand specimens, and have no doubt that the species has been imported into the latter country during the last century.

*Hab.* Eaglehawk Neck, Tasmania (*Turner*), February; Mt. Wellington, Tasmania (*Turner*), January; Mt. Lofty, S.A. (*Wesche*), November; Taralga, N.S.W. (*Dr. Broom*); Toowoomba, Q. (*Higlett*); Wellington, New Zealand (*Cockayne*), December.

## 30. PISON CONGENER, sp. n.

♀. Nigra; segmentis dorsalis 1-3 apice anguste albo-pilosis; alis fusco-hyalinis, venis nigris; mesonoto punctato; segmento ventrali secundo in disco sparse punctato.

Long., ♀ 14 mm., ♂ 12 mm.

♀. Clypeus rounded at the apex, slightly but broadly produced in the middle of the apical margin, closely and very finely punctured and clothed with greyish pubescence. Second joint of the flagellum distinctly longer than the third. Posterior ocelli further from the eyes than from each other, separated from the eyes by a distance equal to about twice their own diameter; eyes about half as far again from each other on the clypeus as on the vertex. Thorax closely and distinctly punctured. Median segment finely and closely punctured, with delicate, irregular, oblique striæ at the base, with a distinct median sulcus, but without a carina, the posterior slope punctured, with indistinct transverse striæ and a strong median sulcus. Abdomen closely microscopically punctured, the two basal segments slightly depressed on the apical margin, the ventral segments more strongly and sparsely punctured, the second and third ventral segments more sparsely punctured in the middle than at the sides. Second abscissa of the radius fully as long as the petiole of the second cubital cell, recurrent nervures interstitial with the transverse cubital nervures.

♂. The clypeus is distinctly pointed at the apex; the eyes a little further apart on the vertex than in the female, and the sculpture of the median segment a little coarser.

*Hab.* Yallingup, S.W. Australia (*Turner*), December.

This is very near *spinolæ*, but is distinguished by the punctured thorax and the greater distance between the eyes on the vertex.

### 31. PISON SCABRUM Turn.

*Pison scabrum* Turn. Proc. Zool. Soc. London, p. 509 (1908), ♀.

This species has the thorax and median segment much more coarsely punctured than in *congener*, the second abscissa of the radius is also much longer, and the eyes are further apart on the clypeus. It is very near *P. nitidus* Sm., from Aru, but has the eyes further apart on the vertex than in that species, and the sculpture of the median segment coarser, with a much less distinct sulcus.

*Hab.* Mackay, Q. (*Turner*).

### 32. PISON PUNCTULATUM Kohl.

*Pison punctulatum* Kohl, Verh. zool.-bot. Ges. Wien, xxxiii. p. 336 (1883), ♀ ♂.

Easily distinguished by the coarse puncturation of the head, thorax, and median segment, and by the strongly constricted abdominal segments. The punctures of the dorsal segments are very distinct; the second ventral segment is rather sparsely punctured, especially in the middle. The antennæ are short and rather stout. The nearest relation is *P. constrictum* Turn., from New Guinea, but the sculpture is much less coarse in that species, and the puncturation of the second ventral segment is different.

*Hab.* Mackay, Q. (*Turner*), December.

### 33. PISON AURIVENTRE Turn.

*Pison auriventre* Turn. Proc. Zool. Soc. London, p. 512 (1908), ♀.

The abdomen in this species is almost entirely covered with golden pubescence, which forms denser bands on the apical margins of the segments. There is a spot of silver pubescence at the apical angles of the first dorsal segment.

*Hab.* Victoria (*French*); Brisbane, Q. (*Hacker*), September.

### 34. PISON DIVES, sp. n.

♀. Nigra; segmentis abdominalibus apice anguste brunneis; tegulis calcarisque fuscis, clypeo argenteo-piloso; abdomine aureo-piloso; alis subhyalinis, venis fusco-ferrugineis.

Long. 10 mm.

♀. Clypeus closely and very finely punctured, broadly and roundly produced on the middle of the apical margin, the

produced portion smooth and shining. Antennæ not very stout, the second joint of the flagellum distinctly, but very slightly, longer than the third, more than twice as long as the first. Posterior ocelli as far from the eyes as from each other, separated from each other by a distance less than the diameter of one ocellus; eyes almost twice as far apart on the clypeus as on the vertex. Head and thorax opaque, microscopically punctured. Median segment finely and closely obliquely striated; the median sulcus very distinct, but not reaching the base, without a distinct carina, the posterior slope transversely striated. Abdomen covered with golden pubescence, on the dorsal segments forming denser apical fasciæ. Petiole of the second cubital cell shorter than the second abscissa of the radius and no longer than the height of the second cubital cell; transverse median nervure interstitial with the basal nervure.

*Hab.* Kuranda, Q. (*Turner*), May.

This is allied to *auriventre*, but is distinguished by the shape of the clypeus, the lesser distance between the eyes on the vertex and between the posterior ocelli, and by the striation of the whole dorsal surface of the median segment, the striation in *auriventre* being confined to the extreme base and almost obsolete. In both species the second ventral segment is very finely, closely, and evenly punctured.

### 35. PISON SIMILLIMUS Sm.

*Pison simillimus* Sm. Trans. Ent. Soc. London, p. 292 (1869), ♂.

This may be distinguished from *marginatum* and other allied species by the very distinct oblique striation of the dorsal surface of the median segment. The tibiæ and tarsi are ferruginous, the apical margins of the dorsal segments brown. In the male the posterior ocelli are a little nearer to each other than to the eyes, but in the female the distances are about equal; the male has the clypeus produced into a spine, that of the female being very broadly rounded. The second abscissa of the radius is as long as or longer than the petiole of the second cubital cell, and the first recurrent nervure is received just before the apex of the first cubital cell.

*Hab.* Victoria (*French*).

### 36. PISON MARGINATUS Sm.

*Pison marginatus* Sm. Cat. Hym. B. M. iv. p. 314 (1856), ♀.

This species has the median segment very closely and finely punctured, the punctures intermingled with very delicate striae, which are not visible in all lights. The margins of the abdominal segments are rather broadly brown, with fasciæ of pale, dull, fulvous pubescence.

*Hab.* Melbourne, Victoria (*French*); Mackay, Q. (*Turner*), October.

37. *PISON SEPARATUS* Sm.

*Pison separatus* Sm. Trans. Ent. Soc. London, p. 294 (1869), ♂.

Very near *marginatus*, but may be distinguished by the sparser punctures of the median segment and the absence of striae, and by the somewhat longer spine of the male clypeus. The colour of the tarsi is a little more ferruginous. I have not seen the female, but it is not improbable that when more material is available it will prove to be merely a western form of *marginatus*.

*Hab.* Champion Bay, W.A. (*Du Boulay*).

38. *PISON TIBIALIS* Sm.

*Pison tibialis* Sm. Trans. Ent. Soc. London, p. 292 (1869), ♂.

The male has the clypeus produced into a spine at the apex; the antennae stout and rather short, the second joint of the flagellum nearly equal to the combined length of the first and third; the posterior ocelli nearer to each other than to the eyes, which are nearly half as far again from each other on the clypeus as on the vertex. The median segment is short and broad, and the insect is of robust build in proportion to the length. The female has the clypeus rounded, somewhat bluntly produced in the middle of the apical margin; the second joint of the flagellum a little shorter in proportion than in the male; the posterior ocelli as near to the eyes as to each other, and the eyes fully half as far again from each other on the clypeus as on the vertex.

*Hab.* Western Australia (*Du Boulay*); Kalamunda, W.A. (*Turner*), February to April; Brisbane, Q. (*Hacker*), December.

39. *PISON FRATERCULUS*, sp. n.

♀. Nigra; tegulis segmentisque abdominalibus fascia lata apicali brunneis; femoribus apice, tibiis tarsisque ferrugineis; segmentis dorsalibus fascia apicali pallide fulvo-pilosa; alis sordide hyalinis, venis fusco-ferrugineis.

♂. *Feminæ similis.*

Long., ♀ 10 mm., ♂ 9·5 mm.

♀. Clypeus microscopically punctured, opaque, clothed with whitish pubescence, bluntly produced and rounded in the middle of the apical margin. Head and thorax minutely punctured; the front clothed with whitish pubescence as high as the emargination of the eyes, without a frontal sulcus; second joint of the flagellum a little longer than the third, but shorter than the first and third combined. Posterior ocelli a little nearer to the eyes than to each other, separated from the eyes by a distance considerably less than their own diameter; the eyes more than half as far again from each other on the clypeus as on the vertex. Median segment finely and closely punctured, the median sulcus and carina distinct, but not very strong; the



posterior slope punctured at the base, transversely striated at the apex, the median sulcus deep at the base, but not extending on to the striated portion. Abdomen microscopically punctured, the segments not constricted; second ventral segment finely and evenly punctured. Recurrent nervures interstitial with the transverse cubital nervures; second abscissa of the radius slightly shorter than the petiole of the second cubital cell; transverse median and basal nervures interstitial.

♂. Clypeus produced into a short spine at the apex; posterior ocelli separated from the eyes by a distance fully equal to their own diameter; second abscissa of the radius a little longer than the petiole of the second cubital cell.

*Hab.* Mackay, Q. (*Turner*), January and February.

Very near *tibialis*, but the eyes are nearer together on the vertex, the sculpture of the thorax and median segment is finer, the second abscissa of the radius is much shorter, and the whole insect is of more slender build, the median segment being longer and more narrowed to the apex.

#### 40. PISON MERIDIONALE, sp. n.

♂. Niger; antennis articulis quatuor basalibus, mandibulis, tegulis pedibusque, coxis exceptis, ferrugineis; segmentis dorsalibus apice late brunneis, fascia apicali aureo-pubescente; alis hyalinis, iridescentibus, venis fuscis.

Long. 9.5 mm.

♂. Clypeus minutely punctured, produced into a short spine at the apex, covered with whitish pubescence, which extends on the front as high as the emargination of the eyes. Second joint of the flagellum very little longer than the third. Posterior ocelli as far from the eyes as from each other, separated from the eyes by a distance about half as great again as their own diameter; eyes half as far again from each other on the clypeus as on the vertex. Head and thorax minutely punctured. Median segment finely punctured-striate, the striae oblique and indistinct, most distinct at the base; the median sulcus distinct, but shallow, the carina only developed at the extreme base; the posterior slope coarsely transversely striated. Abdomen very finely and closely punctured; the basal segment short, a little depressed at the apex; second ventral segment closely and evenly punctured; seventh dorsal segment broadly truncate at the apex. Recurrent nervures interstitial with the transverse cubital nervures; second abscissa of the radius longer than the petiole of the second cubital cell; transverse median nervure received just beyond the basal nervure, not quite interstitial.

*Hab.* Adelaide, S.A.

Near *tibialis*, but differs in the colour of the legs and antennae, in the lesser breadth between the eyes on the vertex, in the finer sculpture of the thorax, and in the sculpture of the median segment.

## 41. PISON DECIPiens Sm.

*Pison decipiens* Sm. Trans. Ent. Soc. London, p. 295 (1869), ♂.

More nearly allied to *dimidiatum* than to any other species, but differs in the colour of the abdomen, the somewhat longer median segment, and in the whiter pubescence of the head and thorax. The clypeus is also less deeply sinuate on each side of the apical spine.

*Hab.* Champion Bay, W.A. (*Du Boulay*).

## 42. PISON INCONSPICUUM, sp. n.

♂. Niger; mandibulis, tegulis pedibusque, coxis exceptis, ferrugineis; trochanteribus anticis femoribusque anticis basi nigricantibus; segmentis dorsalibus apice anguste fusco-brunneis, fascia apicali sparse albido-pubescente; alis hyalinis, venis fuscis.

Long. 5.5 mm.

♂. Clypeus produced into a long spine at the apex, deeply sinuate on each side of the spine, covered with silver pubescence, which extends on the front as high as the emargination of the eyes. Antennæ rather short and stout, the second joint of the flagellum a little longer than the third. Ocelli in an equilateral triangle, the posterior pair as far from the eyes as from each other, separated from the eyes by a distance equal to at least twice their own diameter; the eyes no further apart on the clypeus than on the vertex. Head very much broader than the thorax, very minutely punctured, the frontal sulcus almost obsolete, only visible just below the anterior ocellus; thorax a little more distinctly punctured than the head. Median segment finely granulate, with a few indistinct oblique striæ at the base; median sulcus very shallow, the median carina distinct. Abdomen microscopically punctured, more distinctly punctured on the ventral surface; second ventral segment finely and evenly punctured; seventh dorsal segment dull ferruginous, broadly truncate at the apex. Recurrent nervures interstitial with the transverse cubital nervures; second abscissa of the radius shorter than the petiole of the second cubital cell; transverse median nervure interstitial with the basal nervure.

*Hab.* Mundaring Weir, W.A. (*Turner*), March 18, 1914.

The anterior margin of the clypeus is shaped as in *dimidiatus*, to which species and *decipiens* the relationship is close. But the eyes are much closer together on the clypeus than in either of those species, and the colour of the abdomen is different, the apical chitinous fasciæ being much darker than in *decipiens*, also the antennæ are entirely black.

## 43. PISON AURIFEX Sm.

*Pison aurifex* Sm. Trans. Ent. Soc. London, p. 293 (1869), ♀ ♂.

I have seen no recent specimens of this beautiful species. It is of much more slender build than *vestitus* or *aureosericeum*, the shape of the first abdominal segment being much more elongate.

All the dorsal and ventral segments have broad chitinous bands of brown, covered on the four basal dorsal segments with golden pubescence.

Two females and one male in the British Museum, all from Smith's collection.

*Hab.* Australia.

#### 44. *PISON VESTITUS* Sm.

*Pison vestitus* Sm. Cat. Hym. B. M. iv. p. 315 (1856), ♀.

The type is unique in the British Museum, without any data to show whence it was received. At one time I confused it with *pulchrinum*, but it differs as pointed out in the description of that species. There is a minute tubercle on each side of the mesosternum, as in *auratus* and *aureosericeum*.

*Hab.* Australia.

#### 45. *PISON PULCHRINUM*, sp. n.

♀. Nigra; mandibulis, antennis articulis quinque basalibus, tegulis, femoribus apice, tibiis tarsisque ferrugineis; segmentis dorsalibus 3-6, ventralibus 2-6 fascia apicali brunnea; segmento dorsali primo fascia apicali aureo-pubescente; fronte dense, thorace segmentoque mediano sparsius aureo-pilosis; alis hyalinis, venis fuscis.

♂. *Feminae similis.*

Long., ♀ 13 mm., ♂ 10 mm.

♀. Clypeus very broadly rounded or subtruncate at the apex, clothed with golden pubescence, which extends on the front as high as the emargination of the eyes. Second joint of the flagellum longer than the third, about equal in length to the first and third combined. Posterior ocelli a little further from each other than from the eyes, separated from the eyes by a distance slightly exceeding their own diameter; eyes more than half as far again from each other on the clypeus as on the vertex. Front somewhat convex, the frontal sulcus indistinct; the punctures of the head microscopic. Thorax rather more distinctly punctured, the pronotum and postscutellum clothed with golden pubescence. Mesosternum with a minute tubercle on each side. Median segment short and broad, finely punctured, clothed with pale golden pubescence; the median sulcus distinct, but shallow, the median carina not reaching the apex; the apical slope coarsely transversely striated, with a deep median sulcus. Abdomen microscopically punctured; the basal segment short and broad, a little depressed at the apex, with a broad band of golden pubescence, second segment without an apical band of pubescence, the bands on the third and fourth segments fairly broad. Recurrent nervures interstitial with the transverse cubital nervures; second abscissa of the radius longer than the petiole of the second cubital cell; transverse median nervure received beyond the basal nervure.

♂. Clypeus with a small spine in the middle of the apical

margin; the pubescence on the whole insect paler; seventh dorsal segment widely emarginate at the apex.

*Hab.* Mackay, Q. (*Turner*), December to April; Kuranda, Q. (*Turner*), March to July.

In this species there is no band of golden pubescence on the second dorsal segment, which is present in *vestitus*, the antennæ in that species are black, and the legs piceous, almost black. The eyes are nearer together in *vestitus* than in *pulchrinum*, both on the clypeus and vertex, though the difference in this point is slight.

#### 46. *PISON EXORNATUM*, sp. n.

♀. Nigra; mandibulis, antennis articulis septem basalibus, tegulis, femoribus apice, tibiis, tarsis, abdomine segmento primo, segmentoque quinto margine apicali pallide ferrugineis; alis hyalinis, venis fusco-ferrugineis.

Long. 11-13 mm.

♀. Extremely near *P. pulchrinum*, from which it differs in the ferruginous colour of the first abdominal segment, in the absence of brown chitinous and golden pubescent apical bands on the third and fourth dorsal segments, in the slightly less distance between the eyes on the clypeus, and in the distinctly narrower median segment. The distribution of the golden pubescence on the head, thorax, and median segment, also on the apical band of the first dorsal segment, is the same in both species.

*Hab.* Mackay, Q. (*Turner*), May.

#### 47. *PISON AUREOSERICEUM* Rohw.

*Pison aureosericeum* Rohw. Proc. U.S. Nat. Museum, xlix. p. 246 (1915), ♀ ♂.

This species also strongly resembles *pulchrinum*, except in colour, the ferruginous colour of the legs including the whole of the femora and trochanters; the first abdominal segment is also ferruginous, and there is a broad ferruginous apical band on the second segment; the three apical segments are almost wholly ferruginous. The apical dorsal segment of the male is broadly truncate, not emarginate as in *pulchrinum*.

*Hab.* Kuranda, Q. (*Turner*), February; Mackay, Q. (*Turner*), February and March; Duaringa, Q. (*U.S. Museum*); Victoria (*French*).

#### 48. *PISON AURATUS* Shuck.

*Pison auratus* Shuck. Trans. Ent. Soc. London, ii. p. 78 (1837), ♀.

This is extremely near *aureosericeum*, with which species I had at one time confused it, but it differs in the distinctly longer median segment and in the wholly ferruginous colour of the second ventral segment. The striation of the posterior slope of the median segment is much less coarse than in *aureosericeum*.

*Hab.* Port Darwin (*Dodd*).



49. *PISON EXULTANS*, sp. n.

♂. Niger; mandibulis, antennis apice infuscatiss, tegulis, abdomine segmento primo utrinque nigro-maculato, segmento septimo, femoribus apice, tibiis tarsisque ferrugineis; segmentis 3-6 apice late brunneo-fasciatis; alis sordide hyalinis, venis nigris.

Long. 8 mm.

♂. Clypeus short and broad, the apical margin subtruncate, produced into a point in the middle; antennæ rather stout, distinctly thickened towards the apex, second joint of the flagellum a little longer than the third, less than twice as long as the first. Posterior ocelli a little further from each other than from the eyes, separated from the eyes by a distance slightly exceeding their own diameter; eyes about half as far again from each other on the clypeus as on the vertex; the frontal sulcus very shallow; clypeus and front as far as the emargination of the eyes clothed with whitish pubescence. Head and thorax opaque, microscopically punctured; pronotum clothed with very pale golden pubescence. Median segment rather long, very closely and minutely punctured, with a row of large punctures at the base; the median sulcus well marked but not deep, the median carina very delicate, with a row of distinct punctures on each side of it in the sulcus; the posterior slope closely and finely punctured, with a strong median sulcus. First abdominal segment elongate, subpetiolate, longer than the second, widened to the apex, with an apical band of rather sparse whitish pubescence, the second segment without an apical chitinous or pubescent band; segments 3-6 with broad pale brown chitinous bands clothed with very pale fulvous pubescence; seventh dorsal segment subtriangular, bluntly pointed at the apex; the whole abdomen closely microscopically punctured, more strongly and sparsely on the ventral than on the dorsal surface. First recurrent nervure received just before the apex of the first cubital cell, second interstitial with the second transverse cubital nervure; second cubital cell small, second abscissa of the radius as long as the petiole of the second cubital cell; transverse median nervure received before the basal nervure.

*Hab.* Victoria (*French*).

Easily distinguished from the somewhat similarly coloured species of the *auratus* group by the elongate first abdominal segment and the triangular seventh segment.

50. *PISON BASALIS* Sm.

*Pison basalis* Sm. Trans. Ent. Soc. London, p. 292 (1869), ♀.

This species belongs to the *auratus* group, but may be distinguished by the ferruginous colour of the second dorsal segment. The male has the seventh dorsal segment truncate at the apex, as in *aureosericeum*.

*Hab.* Mackay, Q. (*Turner*), November.

*Old World Species (excluding Australian).*

## 51. PISON (PISONOIDES) OBLITERATUS Sm.

*Pison (Pisonoides) obliteratus* Sm. Journ. Proc. Linn. Soc., Zool. ii. p. 104 (1857), ♀.

*Parapison obliteratus* Sm. Trans. Ent. Soc. London, p. 299 (1869).

This must be taken as the type of Smith's subgenus *Pisonoides*, which is the same as his later genus *Parapison*. Though Kohl treats *Pisonoides* as a *nomen nudum*, I certainly cannot follow him.

The present species may be distinguished from other Oriental *Pisonoides* by the first abdominal segment, which is about twice as long as its apical breadth, being narrow throughout, though gradually broadening towards the apex.

*Hab.* Borneo (*Wallace*); Taiping, Malay Peninsula (*W. B. Orme*); Maulmain, Tenasserim (*Bingham*), November; Kumaon, N.W. India (*Miss A. Brook*), August.

## 52. PISON (PISONOIDES) AGILIS Sm.

*Parapison agilis* Sm. Trans. Ent. Soc. London, p. 300 (1869), ♀.

The legs are piceous, almost black, with whitish calcaria, the fore tibiae and tarsi dull ferruginous brown. It is very near *erythropus*, but in that species the legs are bright ferruginous. The second cubital cell in *erythropus* is pointed on the radius, but in *agilis* the second abscissa of the radius is nearly half as long as the first transverse cubital nervure. Bingham states that the eyes in *agilis* are nearer together on the vertex than in *erythropus*, but this is not the case in the type; he has evidently looked at a Ceylon specimen when comparing, the eyes being slightly nearer to each other both on the vertex and clypeus than in the type. The length of the second abscissa of the radius also varies considerably in Ceylon specimens. The other points of difference given by Bingham are either unsatisfactory or not constant. I am inclined to think that the two forms may be merely local forms of one species, with another local race in Ceylon with somewhat narrower spaces between the eyes both on vertex and clypeus.

*Hab.* Bareilly (*Horne*), type; Ceylon (*Dr. Thwaites*).

## 53. PISON (PISONOIDES) ERYTHROPUS Kohl.

*Parapison rufipes* Sm. Trans. Ent. Soc. London, p. 299 (1869), ♀ (nec *Pisonitus rufipes* Schuck., 1837).

*Pison erythropus* Kohl, Verh. zool.-bot. Ges. Wien, xxxiv. p. 183 (1884).

*Hab.* N.W. India (*Horne*).

## \*54. PISON (PISONOIDES) BROWNI Ashm.

*Pisonoides browni* Ashm. Proc. U.S. National Mus. xxviii. p. 961 (1905), ♂.

I have not seen this species, which appears to be allied to *agilis*, but may be distinguished by the striation of the posterior slope of the median segment, which is punctured in *agilis*.

*Hab.* Manila (*R. Brown*).

## \*55. PISON (PISONOIDES) KOREENSIS Rad.

*Paraceramius koreensis* Rad. Hor. Soc. Ent. Ross. xxi. p. 433 (1887), ♀.

The description of this species is insufficient, but I do not think it is identical with any Indian species.

## 56. PISON (PISONOIDES) ROTHNEYI Cam.

*Pison (Parapison) rothneyi* Cam. Mem. Manchester Lit. & Phil. Soc. xli. p. 81 (1896), ♀.

*Pison (Parapison) crassicornue* Cam. Mem. Manchester Lit. & Phil. Soc. xli. 13, p. 25 (1897), ♂ (as ♀).

These are undoubtedly sexes of one species. I have seen Cameron's types.

*Hab.* Barrackpore (*Rothney*).

## 57. PISON (PISONOIDES) DIFFERENS, sp. n.

♀. Nigra, opaca, segmento mediano subnitido; mandibulis, tegulis, segmentis dorsalibus et ventralibus fascia lata apicali, femoribus apice tibiisque brunneo-testaceis; alis hyalinis, iridescentibus, venis fuscis.

Long. 8 mm.

♀. Head and thorax opaque, very closely microscopically punctured; clypeus broadly rounded at the apex; the front with a distinct longitudinal sulcus extending to the anterior ocellus; eyes a little further apart on the clypeus than on the vertex, separated on the clypeus by a distance slightly exceeding the length of the scape and the two basal joints of the flagellum combined; posterior ocelli a little further from each other than from the eyes, separated from the eyes by a distance equal to the diameter of one ocellus. Second and third joints of the flagellum subequal. Median segment slender, shining and microscopically punctured; the dorsal surface nearly as long as the mesonotum and rather strongly narrowed to the apex; the median sulcus broad and distinct, without a median carina, distinctly interrupted between the dorsal and posterior surfaces, with a minute triangular raised area projecting into the sulcus at the base of the segment; the posterior slope minutely punctured, without striae. Abdomen minutely, closely, and evenly punctured, both on the dorsal and ventral surfaces. Second abscissa of the radius less than half as long as the first transverse cubital

nervure, much shorter than the distance between the recurrent nervures on the cubitus; second recurrent nervure interstitial with the first transverse cubital nervure.

*Hab.* Shillong, Assam, 5000 ft. (*Turner*), May. 3 ♀ ♀.

Very near *rothneyi*, of which it may prove to be a subspecies, but as there are structural differences it cannot be treated as identical. The ocelli are much smaller, the eyes are further apart both on the clypeus and the vertex, the puncturation of the head is somewhat finer, the median segment has the dorsal surface very distinctly longer and more narrowed to the apex, and the sulcus of the median segment is broadly interrupted between the dorsal and posterior surfaces, not almost continuous as in *rothneyi*. The pronotum is also a little more depressed in the present species. The apical half of the posterior slope of the median segment is finely transversely striated in *rothneyi*, finely punctured in *differeus*.

#### 58. PISON (PISONOIDES) ISOLATUM TURN.

*Pison* (*Parapison*) *isolatum* Turn. Trans. Linn. Soc. xiv. p. 372 (1911), ♀ ♂.

This is a very distinct species, without chitinous or pubescent bands at the apex of the dorsal segments, being very much nearer to the Australian *erythrocerus* Kohl than to the Asiatic species. The antennæ are much longer than in *erythrocerus*, and the sculpture of the median segment is different.

*Hab.* Silhouette Island, Seychelles (*Scott*).

#### 59. PISON (PISONOIDES) TESTACEIPES, sp. n.

♂. Niger; mandibulis, palpis, scapo, tegulis, tibiis anticis tarsisque rufo-testaceis; segmento abdominali quarto dimidio apicali, quinto, sexto, septimoque brunneo-testaceis; alis hyalinis, iridescentibus, margine apicali late infuscatis, venis nigris.

Long. 7 mm.

♂. Clypeus broadly truncate at the apex; antennæ rather slender at the base, slightly thickened towards the apex, the second joint of the flagellum only a little longer than the third, about twice as long as the first. Posterior ocelli separated both from each other and from the eyes by a distance about equal to the diameter of one ocellus, further from the anterior ocellus than from each other. Clypeus and front as high as the emargination of the eyes clothed with silver pubescence, the frontal sulcus indistinct, front opaque, finely punctured-rugulose, vertex finely punctured. Eyes half as far again from each other on the clypeus as on the vertex. Pronotum short, much shorter than in *P. xanthopus*; mesonotum and scutellum finely and closely, but distinctly punctured; mesopleuræ more finely punctured, with a fovea in the middle. Median segment closely punctured, with a distinct triangular dorsal area which is obliquely striated at the extreme base, the median sulcus strongly marked, the



carina only visible at the base, the sides of the segment outside the triangular area finely and irregularly striated; the posterior slope more distinctly transversely striated, with a rather indistinct median sulcus. Abdomen microscopically punctured, without fasciæ of pubescence; the first segment rather strongly depressed at the apex, the ventral surface evenly and much more distinctly punctured; the seventh ventral segment very shallowly emarginate at the apex. Second cubital cell almost pointed on the radius, first transverse cubital nervure a little nearer to the first than to the second recurrent nervure, transverse median nervure received before the basal nervure.

*Hab.* Zungeru, N. Nigeria (*J. W. Scott-Macfie*), November.

This is very distinct from *xanthopus* in the sculpture of the median segment as well as in the neurulation, also in the structure of the apical ventral segments.

#### 60. *PISON ARGENTATUS* Shuck.

*Pison* (*Pisonitus*) *argentatus* Shuck. Trans. Ent. Soc. London, ii. p. 79 (1837).

*Pison fuscipalpe* Cam. Proc. Zool. Soc. London, ii. p. 27 (1901).

*Pisonitus argenteus* Ashm. Proc. U.S. National Mus. xxviii. p. 131 (1904).

This is a very wide-ranging species, and the original habitat is doubtful. In recent years it has been imported into Hawaii, where it has increased rapidly, apparently to the detriment of the indigenous species. There seems to be some slight variation in the intensity of the sculpture of the median segment, but nothing of specific importance.

*Hab.* Mauritius (*Shuckard*), type; Madagascar (*Saussure*); Rangoon (*Bingham*), April; Amherst, Tenasserim (*Bingham*), April; Singapore (*Cameron*); Borneo (*ex coll. Cameron*); Bacoar, Philippines (*Ashmead*); Oahu, Hawaii (*Perkins*), July.

#### 61. *PISON RUGOSUS* Sm.

*Pison* (*Pisonitus*) *rugosus* Sm. Cat. Hym. B. M. iv. p. 313 (1856), ♀.

*Pison appendiculatum* Cam. Mem. Manchester Lit. & Phil. Soc. xli. 13, p. 24 (1897).

Easily distinguished from *argentatus*, the only other Oriental species of the *Pisonitus* section, by the much coarser puncturation of the head and thorax and the stronger constriction of the abdominal segments. Intermediate in neurulation between *Pisonitus* and *Pison*.

*Hab.* N.W. Provinces of India, throughout N.E. India and Burma; Poona, W. India.

#### 62. *PISON ATER* Spin.

*Alyson ater* Spin. Ins. Lig. ii. 4, p. 253 (1808), ♀.

*Pison jurini* Spin. Ins. Lig. ii. 4, p. 256 (1808), ♂.

*Tachybulus niger* Latr. Gen. Crust. et Ins. iv. p. 75 (1809), ♀.

*Pison atrum* Kohl, Verh. zool.-bot. Ges. Wien, xxxiv. p. 184, ♂.

This is the best-known European species, though far from common. It may be distinguished from the other South European species *P. sericeum* by the sculpture of the median segment, which is punctured in *ater*, finely obliquely striated in *sericeum*, and by the much greater distance between the posterior ocelli and eyes of *sericeum*, equal in the male of that species to twice the diameter of an ocellus, in the male of *ater* only equal to the diameter of an ocellus. In *sericeum* also the margins of the abdominal segments are dark brown, in *ater* black. The size of *ater* is also considerably less than that of *sericeum*.

*Hab.* Genoa (*Spinola*); S. France (*Latreille*); Albania (*Saunders*); Switzerland (*Kohl*); Gibraltar (*Walker*).

✓ 63. *PISON SERICEUM* Kohl.

*Pison sericeum* Kohl, Verh. zool.-bot. Ges. Wien, xxxviii. p. 140 (1888), ♂.

*Hab.* Attica (*Kohl*); Italy (*ex coll. F. Smith*).

✓ \*64. *PISON ASSIMILE* Sickm.

*Pison assimile* Sickm. Zool. Jahrb. viii. p. 212 (1895), ♀.

Very similar to *P. ater*, but more finely punctured.

*Hab.* Tientsin.

65. *PISON FASCIATUS* Rad.

*Pseudonysson fasciatus* Rad. Horæ Soc. Ent. Ross. xii. p. 105 (1876), ♂; Rad. Bull. Soc. Nat. Moscou, p. 592 (1891).

The description is poor, but apparently the species is allied to *algiricum*, but with normal antennæ. To this species I assign an Indian specimen with some doubt.

*Hab.* S.E. Caucasus; Chapra, Bengal (*Mackenzie*).

✓ \*66. *PISON SUSPICAX* Kokuji.

*Pison suspicax* Kokuji, Mitt. Kaukas. Mus. vii. p. 6 (1912), ♂.

This may be distinguished from all other Palearctic species by the golden pubescence of the head and abdominal fasciæ.

*Hab.* Caucasus.

67. *PISON ALGIRICUM* Kohl.

*Pison algiricum* Kohl, Termes Fuz. xxi. p. 353 (1898), ♀ ♂.

In the male sex this is distinguished by the thickening of the third to sixth joints of the flagellum beneath, near the apex. A somewhat similar structure, much more strongly developed, but confined to the third and fourth joints, is seen in the Australian *P. fenestratus* Sm. Kohl compares the present species with *fasciatus* Rad., in which the antennæ are normal.

*Hab.* Oran (*Schmiedeknecht*); Marakesh (*Escalera*), April.

## 68. PISON REGALIS Sm.

*Pison regalis* Sm. Trans. Ent. Soc. London, (2) ii. p. 34 (1852), ♀ ♂.

Allied to *insigne* Sickm., but much larger; the male has similar transverse ridges on the second, third, and fourth ventral segments, which appear also in a rudimentary form on the second and third segments of the female. But it differs from *insigne* in the absence of a tubercle on the mesopleuræ before the intermediate coxæ, and in the absence of a transverse depression on the mesosternum. The apical ventral segment of the male is very deeply emarginate, with a long spine on each side.

*Hab.* Ning-po-foo, China (*Fortune*); Hsikou, near Tientsin (*F. M. Thomson*), June.

## ✓ \*69. PISON INSIGNE Sickm.

*Pison insigne* Sickm. Zool. Jahrb. viii. p. 210 (1895), ♂.

Differs from *P. regalis* as noticed above; the mesonotum is also more sparsely and finely punctured.

*Hab.* Nankou Pass, N. China (*Weber*).

## 70. PISON XANTHOPUS Brullé.

*Nephridia xanthopus* Brullé, Ann. Soc. Ent. France, ii. p. 408 (1833).

*Pison obscurus* Shuck. Trans. Ent. Soc. London, ii. p. 75 (1837), ♀ ♂.

A wide-ranging African species in which the median segment is strongly obliquely striated, the three or four apical abdominal segments in the male more or less red; the clypeus in the male is somewhat angular in the middle on the apical margin, but not produced into a tooth, that of the female very broadly rounded or subtruncate; the posterior ocelli further from each other than from the eyes, separated from the eyes by less than the diameter of an ocellus. The position of the second recurrent nervure is variable.

*Hab.* Meadi, Egypt (*Egyptian Department of Agriculture*), July; Entebbe, Uganda (*C. G. Gowdey*), March, August, and September; Obuasi, Ashanti (*Dr. Graham*), February to April; Sierra Leone (*Morgan*).

## ✓ \*71. PISON MONTANUS Cam.

*Pison montanus* Cam. in Sjöstedt, Kilimandj. Meru Exp. ii. p. 289 (1910), ♂.

The description is poor, but from the coarse sculpture the relationship would seem to be nearest to *allonymum*.

*Hab.* Kibonoto, Kilimandjaro.

72. *PISON ALLONYMUM* Schulz.

*Pison iridipennis* Cam. Rec. Albany Mus. i. p. 261 (1905), ♂ (nec Smith, 1879).

*Pisum allonymum* Schulz, Spolia Hymen. p. 213 (1906).

The head, thorax, and median segment are coarsely punctured, the eyes very far apart on the vertex, nearly as far as on the clypeus, the posterior ocelli further from the eyes than from each other. I do not think that this can be *rhodesianum* Bisch., the distance between the eyes being so much greater than in *ater*, and the puncturation much coarser.

*Hab.* Dunbrody (*O'Neill*); Willowmore (*Dr. Brauns*); Mid Luangwa River, N.E. Rhodesia (*Neave*), August; Nawalia, Niamadzi River, N.E. Rhodesia (*Neave*), August.

\*73. *PISON RHODESIANUM* Bisch.

*Pison rhodesianum* Bisch. Arch. f. Naturg. A. 3, p. 75 (1913), ♀.

From the description this seems to be very near *P. ater*, with which Bischoff compares it. I consider that it is certainly distinct from any of the African species described by Cameron.

*Hab.* Buluwayo; October.

74. *PISON TRANSVAALENSIS* Cam.

*Pison transvaalensis* Cam. Ann. Transv. Mus. ii. p. 152 (1910), ♂.

A specimen of this species, labelled "type" by Cameron, is in the British Museum. It is from the Cameron collection, and is a female; but Cameron was accustomed to label all specimens before him "type," not only one. The species is very near *denticeps*, and I am inclined to think that Cameron has mistaken the sex of his type, and that *denticeps* is really the male of *transvaalensis*, in which case the latter name would stand. But the position of the first recurrent nervure is different. The posterior ocelli in *transvaalensis* are very close to the eyes.

*Hab.* Pretoria.

75. *PISON DENTICEPS* Cam.

*Pison denticeps* Cam. Ann. Transv. Mus. ii. p. 153 (1910), ♂.

This may be distinguished from *xanthopus* by the finer striation of the median segment, the less constricted abdominal segments, the apical ventral segment is produced into two points as is usual in the genus, not into one only as in *xanthopus*; the clypeus also has a distinct spine at the apex, and the front is more distinctly convex. This species is remarkable as showing a transition in neururation from *Pison* to *Pisonoides*, the second transverse cubital nervure being sometimes entirely absent, but sometimes represented by a stump; probably a long series would show the full transition.

*Hab.* Transvaal.



\*76. *PISON CLYPEATUS* Cam.

*Pison clypeatus* Cam. Ann. Transv. Mus. ii. p. 153 (1910), ♀.

Evidently allied to *xanthopus*, but the clypeus is narrowed to a sharp point in the centre, the striation of the median segment is coarser, and the second abscissa of the radius longer.

*Hab.* Warmberg, Zoutpansberg district; October.

77. *PISON INEQUALE*, sp. n.

♂. Niger; mandibulis apicē fusco-ferrugineis; tegulis calcarisque brunneis; alis hyalinis, apice late infuscatis, iridescentibus, venis nigris; cellula cubitali secunda minutissima aut oblitterata.

Long. 7 mm.

♂. Clypeus broad, produced into a short spine in the middle of the apical margin; clothed with silver pubescence, which extends on the front as high as the emargination of the eyes. Second joint of the flagellum very slightly longer than the third; eyes separated on the clypeus by a distance half as great again as that separating them on the vertex; posterior ocelli as far from the eyes as from each other, separated from the eyes by a distance exceeding the diameter of an ocellus. Front closely punctured-rugose, the frontal sulcus obsolete, except just below the anterior ocellus, the vertex closely and rather coarsely punctured. Pronotum short, as in *P. ater*; mesonotum and scutellum coarsely punctured, but less closely than the vertex, more coarsely than in *P. ater*; pleuræ very closely punctured, but more finely than in *P. ater*. Median segment with a deep median sulcus which is very widely forked close to the base, enclosing a very small basal area, the branches of the sulcus obliquely striated, the main sulcus extending to the apex of the segment, with a strong median carina not quite reaching the apex; on each side of the sulcus the segment is very closely and finely punctured, with numerous, fine, irregular striæ; the apical slope coarsely punctured-rugose, with a deep median sulcus. Abdomen finely punctured, the segments moderately depressed at the apex, the apical bands of white pubescence well defined laterally, but not distinct in the middle, the basal segment more sparsely and strongly punctured than the second, the apical segments very closely and minutely punctured; the ventral segments more sparsely but evenly punctured; apical ventral segment very shallowly emarginate, the angles not produced into points. Second abscissa of the radius very short, second cubital cell obliterated on the left side, very minute on the right, second recurrent nervure on the right side interstitial with the second transverse cubital nervure, first received before the apex of the first cubital cell. Basal and transverse median nervures interstitial.

*Hab.* Mlanje, Nyassaland (*S. A. Neave*), 2300 ft., October.

Very near *ater* and *rhodesianus*, but differs in the sculpture,

especially on the thorax and median segment; also in the reduction of the second cubital cell. It also differs in these characters from *montanus*. There is no impressed line behind the posterior ocelli.

#### 78. *PISON WOLLASTONI*, sp. n.

♀. Nigra, albo-pilosa; tegulis apice pallide brunneis; alis hyalinis, apice late infumatis, venis nigris, stigmatibus fusco-ferrugineo.

Long. 11 mm.

♀. Clypeus produced into a point at the apex, punctured finely and closely, and clothed with rather long whitish pubescence which extends on the front as far as the emargination of the eyes. Antennæ rather slender, not thickened towards the apex, the second joint of the flagellum distinctly longer than the third, but shorter than the first and third combined. Posterior ocelli nearer to the eyes than to each other, separated from the eyes by a distance considerably less than the diameter of one ocellus; the eyes nearly twice as far from each other on the clypeus as on the vertex. Front punctured-rugose, the vertex and ocellar space more finely punctured; pronotum short, steeply sloped anteriorly; mesonotum and mesopleura coarsely punctured, scutellum more finely and sparsely punctured. Median segment closely punctured-rugose, the median sulcus shallow and not extending to the apex, the median carina distinct; the posterior slope rugose, with a shallow median sulcus. Abdomen smooth and shining on the dorsal surface, the segments scarcely depressed at the apex, the apical fasciæ of white pubescence confined to the sides; the ventral segments sparsely but distinctly punctured. Second abscissa of the radius shorter than the petiole of the well-developed second cubital cell; second recurrent nervure interstitial with the second transverse cubital nervure, first received by the second cubital cell close to the base; basal and transverse median nervures interstitial.

*Hab.* St. Helena (*Wollaston*).

A very distinct species, not at all nearly allied to any Ethiopian form.

#### 79. *PISON SPECULARE* Turn.

*Pison speculare* Turn. Trans. Linn. Soc. xiv. p. 371 (1911), ♀.

The posterior ocelli almost touch the eyes; the puncturation of the whole insect is very delicate, microscopic on both dorsal and ventral segments of the abdomen.

*Hab.* Praslin, Seychelles (*Scott*).

#### 80. *PISON KOHLII* Bingham.

*Pison kohlii* Bingham. Fauna Brit. India, Hymen. i. p. 220 (1897), ♀.

*Pison aureopilosus* Cam. Soc. Entom. xxiv. p. 73 (1909).

Easily distinguished from *punctifrons* by the golden pubescence of the head and abdomen, by the almost obsolete puncturation of the mesonotum, and by the coarse longitudinal striation of the median segment, the striation in *punctifrons* being oblique.

*Hab.* Dawnat Range, Tenasserim (*Bingham*), December; Borneo (*Cameron*).

81. PISON PUNCTIFRONS, Shuck.

*Pison punctifrons* Shuck. Trans. Ent. Soc. ii. p. 77 (1837), ♀.

*Pison suspiciosus* Sm. Journ. Proc. Linn. Soc., Zool. ii. p. 104 (1858), ♀.

*Pison fabricator* Sm. Trans. Ent. Soc. London, p. 297 (1869), ♀.

*Pison striolatum* Cam. Mem. Manchester Lit. & Phil. Soc. xli. p. 82 (1896).

*Pison javanus* Cam. Tijdsch. f. Entom. xlviii. p. 63 (1905), ♂.

I think all these are identical—certainly the first four, and almost certainly *Cameron's* species also.

*Hab.* Yunzalin Valley, Tenasserim (*Bingham*), April; Rangoon (*Bingham*), May; Singapore (*Wallace*); Samarang, Java (*Drescher*); Ceylon (*Thwaites*); Hong Kong (*Smith*); Foo-Chow (*Rickett*).

✓ 82. PISON ORIENTALE Cam.

*Pison orientale* Cam. Mem. Manchester Lit. & Phil. Soc. xli. 13, p. 23 (1897).

*Hab.* Barrackpore (*Rothney*).

✓ \*83. PISON LAGUNÆ Ashm.

*Pison lagunæ* Ashm. Proc. U.S. National Mus. xxviii. p. 131 (1904), ♂.

I suspect that this will prove to be a synonym of *punctifrons*, but the description is too poor for certainty.

*Hab.* Laguna, Philippines (*Stangl*).

\*84. PISON ASHMEADI, nom. nov.

*Pison punctulatus* Ashm. Proc. U.S. National Mus. xxviii. p. 960 (1905), ♂ (nec *P. punctulatum* Kohl, 1883).

I cannot identify this species.

*Hab.* Manila (*Brown*).

✓ 85. PISON PALLIDIPALPIS Sm.

*Pison pallidipalpis* Sm. Journ. Proc. Linn. Soc., Zool. vii. p. 35 (1863), ♀.

Closely allied to *insularis* Sm. and *priscum* Turn. The puncturation of the second ventral segment is microscopic.

*Hab.* Ceram (*Wallace*).

86. *PISON INSULARIS* Sm.

*Pison insularis* Sm. Trans. Ent. Soc. London, p. 297 (1869), ♀.

Very near *priscum* Turn., but differs as pointed out under that species. The second ventral segment is shining and smooth.

*Hab.* New Hebrides.

\*87. *PISON GLABRUM* Kohl.

*Pison glabrum* Kohl, Denkschr. Akad. Wiss. Wien, lxxxi. p. 309 (1908), ♀.

This seems to be very near *insularis* in sculpture; but the wings are infusate; and either the eyes are further apart on the vertex or the basal joints of the flagellum are shorter.

*Hab.* Upolu, Samoa (*Reckinger*).

\*88. *PISON STRICTIFRONS* Vachal.

*Pison strictifrons* Vachal, Revue d'Entom. xxvi. p. 114 (1907), ♀.

A much smaller species than *insularis*, though agreeing with it in nearness of the posterior ocelli to the eyes and in the smooth median segment. The description is very insufficient.

*Hab.* New Caledonia.

89. *PISON IMPUNCTATUM* Turn.

*Pison impunctatum* Turn. Ann. & Mag. Nat. Hist. (8) ix. p. 200 (1912), ♀.

Probably closely allied to *strictifrons*, also to *iridipennis* Sm. From the latter it differs in the lesser distance between the eyes on the vertex and the smoother median segment.

*Hab.* New Guinea (*Wollaston*).

90. *PISON IRIDIPENNIS* Sm.

*Pison iridipennis* Smith, Journ. Linn. Soc., Zool. xiv. p. 676 (1879), ♂; Smith, Descr. New Spec. Hymen. p. 139 (1879), ♂.

*Hab.* Hawaii; Koolau, July; Samoa.

91. *PISON TUBERCULATUS* Sm.

*Pison tuberculatus* Sm. Trans. Ent. Soc. London, p. 296 (1869), ♂.

A small species closely allied to *iridipennis*, but whereas that species has in the male a short transverse ridge on the third ventral segment and a similar but less distinct ridge on the fourth, *tuberculatus* has a rounded tubercle on each side of the third ventral segment and a similar but less distinct tubercle on each side of the second and fourth.

*Hab.* New Zealand.



## ✓ 92. PISON MOROSUS Sm.

*Pison morosus* Sm. Cat. Hym. B. M. iv. p. 317 (1856), ♀ (nec Smith, 1864).

Much larger than *tuberculatus*, and has no tubercles on the ventral segments of the male. It appears to be the commoner of the two indigenous species in New Zealand; the third species, *P. spinolæ*, being a comparatively recent importation.

*Hab.* New Zealand.

## ✓ 93. PISON TAHITENSE Sauss.

*Pison tahitense* Sauss. Reise d. Novara, Zool. ii., Hymen. p. 65 (1867), ♀ ♂.

Allied to *P. hospes*, but has the eyes nearer together both on the vertex and the clypeus, and the clypeus of the male more strongly produced.

*Hab.* Tahiti; Samoa; Rarotonga.

## ✓ \*94. PISON COLLARE Kohl.

*Pison collare* Kohl, Verh. zool.-bot. Ges. Wien, xxxiii. p. 337 (1883), ♀.

The clypeus of the female is produced into an acute spine; the front coarsely punctured; the median segment shining and sparsely punctured, with a few transverse striæ near the apex of the posterior slope.

*Hab.* Duke of York Island, New Britain.

## ✓ 95. PISON NITIDUS Sm.

*Pison nitidus* Sm. Journ. Linn. Soc., Zool. iii. p. 160 (1858), ♀.

Nearest to *scabrum* Turn.

*Hab.* Aru (*Wallace*); Ké (*Wallace*).

## 96. PISON CONSTRICTUM Turn.

*Pison morosus* Sm. Journ. Linn. Soc., Zool. viii. p. 85 (1864), ♀ (nec Sm., 1856).

*Pison constrictum* Turn. Ann. & Mag. Nat. Hist. (8) ix. p. 201 (1912), ♂.

These are almost certainly sexes of one species. It is nearest to the Queensland species, *P. punctulatum* Kohl.

*Hab.* New Guinea (*Wallace*); Mysol (*Wallace*), Mimika River, New Guinea (*Wollaston*).

## ✓ 97. PISON RECHINGERI Kohl.

*Pison rechingeri* Kohl, Denkschr. Akad. Wiss. Wien, lxxxi. p. 309 (1908), ♀ ♂.

Differs from *hospes* and *constrictum* in the sculpture of the median segment and the better-defined frontal sulcus.

*Hab.* Upolu, Samoa (*Rechinger*); Tonga (ex coll. F. Smith).

98. *PISON HOSPE* Sm.

*Pison hospes* Smith, Journ. Linn. Soc., Zool. xiv. p. 676 (1879), ♀ ♂; Smith, Descr. New Spec. Hymen. p. 139 (1879), ♀ ♂.

*Hab.* Hawaii; Singapore (*Ridley*); Cocos Islands (*Wood Jones*).

Probably imported into Hawaii. It is doubtfully distinct from *P. pallidipalpis* Sm.

*New World Species.*✓ 99. *PISON LÆVIS* Sm.

*Pison lævis* Sm. Cat. Hym. B. M. iv. p. 317 (1856), ♀.

*Hab.* Georgia.

✓ 100. *PISON CONFORMIS* Sm.

*Pison conformis* Sm. Trans. Ent. Soc. London, p. 297 (1869), ♂.

*Hab.* Mexico.

✓ \*101. *PISON CRESSONI* Rohw.

*Pison cressoni* Rohw. Proc. U.S. National Mus. xl. p. 570 (1911).

*Hab.* Nicaragua.

\*102. *PISON CAMERONII* Kohl.

*Pison fasciatum* Kohl, Verh. zool.-bot. Ges. Wien, xxxiii. p. 339 (1883), ♀ (nec Radoszkowski).

*Pison cameronii* Kohl, Verh. zool.-bot. Ges. Wien, xlvii. p. 546 (1893).

*Hab.* Mexico or Peru.

✓ 103. *PISON MACULIPENNIS* Sm.

*Pison maculipennis* Sm. Journ. of Entom. i. p. 80 (1860), ♀.

*Hab.* Para (*Bates*); Ega (*Bates*).

✓ \*104. *PISON PARAENSIS* Spin.

*Pison paraensis* Spin. Mem. Accad. Sc. Torino, (2) xiii. p. 58 (1851), (1853), ♀.

*Hab.* Lower Amazon.

✓ \*105. *PISON AUREOFACIALE* Strand.

*Pison aureofaciale* Strand, Zool. Jahrb. xxix. p. 174 (1910).

*Hab.* Paraguay.

✓ \*106. *PISON CONVEXIFRONS* Tasch.

*Pison convexifrons* Tasch. Zeitschr. f. d. Ges. Naturw. xxxvi.  
p. 18 (1870), ♀.

*Hab.* Rio de Janeiro.

✓ 107. *PISON CHILENSIS* Spin.

*Pison chilensis* Spinola, in Gay, Hist. fis. Chile, Zool. vi. p. 326  
(1851).

*Hab.* Santiago; Coquimbo.

✓ \*108. *PISON AREOLATUS* Spin.

*Pison areolatus* Spinola, in Gay, Hist. fis. Chile, Zool. vi. p. 327  
(1851), ♀.

*Hab.* Chile.

\*109. *PISON VARIICORNIS* Reed.

*Pison variicornis* Reed, Anal. Univ. Chile, lxxxv. p. 22 (1894).

*Hab.* Chile.

*Pison letus* Sm. and *Pison flavipictus* Sm., both collected by Bates on the Upper Amazon, belong, according to my determination, to the genus *Scapheutes* Handl., but the types appear to be lost or have not been marked. *Pison pilosus* Sm. belongs to the genus *Pisonopsis*. Smith evidently discovered his error as to the first two, for they are omitted from his list of the genus in 1869.

Genus *PISONOPSIS* Fox.

✓ 1. *P. CLYPEATA* Fox, Psyche, vi. p. 553 (1893), ♀ ♂. Nevada.

✓ 2. *P. TRIANGULARIS* Ashm. Ent. Mus. Philadelphia, x. p. 9  
(1899). Colorado.

✓ 3. *P. BIRKMANNI* Rohw. Trans. American Entom. Soc. xxxv.  
p. 129 (1909). Texas.

✓ 4. *P. PILOSUS* Sm. Ann. & Mag. Nat. Hist. (4) xii. p. 295  
(1873) (as *Pison pilosus*). Ega.

✓ 5. *P. ARGENTINUS* Schrottky, Ann. Soc. Argent. lxviii. p. 251  
(1909). Catamarca.

✓ 6. *P. ANOMALA* Mantero, Bull. Soc. Ent. Ital. xxxiii. p. 202  
(1901). Patagonia.

I have only seen *P. pilosus* Sm., and therefore can give no key to the species.

The genus is entirely American, and will probably prove to be nearly as rich in species on that continent as true *Pison*.